GENERAL MOTORS POWERTRAIN - BEDFORD, INDIANA

U.S. EPA PROJECT STATUS UPDATE FACT SHEET

Polychlorinated Biphenyl (PCB) contamination is a problem at the General Motors Powertrain Facility in Bedford, Ind. and GM is evaluating the site to identify the best ways to clean up the pollution. PCB is a concern for human health primarily because it has the potential to act as a carcinogenic (cancer-causing) chemical on long-term exposure. The company is working closely with U.S. Environmental Protection Agency Region 5.

Other agencies involved in the project are the Agency for Toxic Substances and Disease Registry (ATSDR), the Indiana Department of Environmental Management (IDEM), the Indiana State Department of Health (ISDH), the Lawrence County Health Department (LCHD), and the U.S. Fish and Wildlife Service (U.S. FWS).

HISTORY

The 150-acre GM Powertrain Facility was built in the early 1900s as a limestone milling operation. The federal government bought the mill in 1942 and GM built aluminum aircraft engines there for the government. After the World War II, GM bought the facility and has continued to run it as an aluminum foundry. The company still makes aluminum casings, pistons and engine blocks at the plant.

For many years, GM's die casting machines used hydraulic fluids that contained PCBs. Oil that leaked from these machines flowed into a tunnel system under the plant. The tunnels emptied into a series of wastewater treatment lagoons, where the heavy oil was recovered. But the treatment lagoons eventually emptied into a local stream, causing PCB contamination.

Since GM installed a modern treatment plant, this source of pollution is under control. A device called a carbon adsorption filter forces the facility's wastewater through carbon, which retains the contaminants. The IDEM is in the process of renewing GM's wastewater discharge permit

under the National Pollutant Discharge Elimination System (NPDES) and will set discharge limits for a variety of pollutants, including PCBs. GM is currently regularly tests the treated wastewater to ensure it meets the previously set discharge limits.

SITE INVESTIGATIONS TO DATE

GM is now looking for additional sources of contamination, both on the facility grounds and in the surrounding area.

As part of this investigation, GM has collected water, soil, and sediment samples along the Bailey's Branch and Pleasant Run Creek system. They found PCB contamination in samples taken as far downstream as the junction with Salt Creek. The amount of PCBs was higher in samples taken near the treatment plant and parts of the surrounding flood plain. Flood waters took PCB-contaminated sediment out of the creek banks and onto the flood plain. When the water receded, the contamination remained. The contamination is mainly limited to the creek channels and flood plain as shown in Figure 1. For detailed maps of the extent of contamination as determined by sampling, please consult the maps available in the Bedford Public Library or the GM Website at:
http://www.Bedfordpowertraincorrectiveaction.com/docrepository/index.asp.

There is also an area near the treatment plant where oil leaks from the ground into the creek during heavy rain. This area has been controlled and is no longer discharging to the creek, but it indicates that pollution has affected groundwater in the bedrock.

Also, GM has found contamination in some of the unnamed tributaries west and north of the facility. The PCB levels here are not as high as those found in Bailey's Branch or Pleasant Run Creek, but testing in those areas was expanded. There may be areas north of the plant where material containing PCBs was dumped, and investigation of those areas is proceeding.

In addition to sampling residential property directly along the creeks, the company has taken soil samples in residential areas near the facility but that are not directly adjoining the creeks. Most

of these samples do not show significant levels of PCBs.

GM tested private wells near the facility, and a few have shown levels of PCBs above drinking water standards. One abandoned well was found to contain PCB oil. Many of the local private wells were abandoned and water from those still in use is not used for drinking water. Study of the wells and springs in the area will help investigators learn more about the flow of ground water and where it is contaminated. Bedford's water supply is tested for PCBs and meets drinking water standards. You can find more information on Bedford's drinking water supply at http://bedford.in.us/WaterQuality.html.

At the Powertrain facility itself, GM has taken soil samples in 24 locations, called Areas of Interest (AOI). A map of these AOIs can be found at http://www.bedfordpowertraincorrectiveaction.com/projectoverview/inv_activities_onsite.htm

These AOIs include former lagoons, lagoon sludge disposal areas, fill areas and spots where spills occurred. Investigators are also drilling wells on the property to test the ground water, in much the same way they are testing private wells.

Based on a comprehensive suite of chemical testing done on the Bailey's Branch/Pleasant Run creek system in October 2001, PCBs appear to be the only contaminant of concern outside the facility. EPA is evaluating GM's data to ensure its quality and the agencies have taken split samples with GM to verify the results

On February 21,2002, U.S. EPA issued to General Motors an approval to stabilize, remove and dispose of the PCB contaminated sludge stored in the two one-million gallon tanks at the GM Powertrain Bedford Facility.The two million gallon tanks were identified as the West tank and the East tank. The approval was granted in accordance with the Federal PCB regul;ations at 40 CFR Section 761.61(c). The approval includes additional requirements to ensure that the stabilization, removal and disposal of the PCB contaminated sludge do not pose an unreasonable risk to health or the environment.

PCBs, VOCs and PAHs were monitored during the stabilization and removal activities. Sludge on both tanks was stabilized, removed and disposed at EQ, a TSCA and RCRA approved landfill in Michigan. The West tank was pressured washed and then demolished. The steel was also shipped to EQ for disposal. The subsurface of the west tank (gravel and the top later of clay) was removed and shipped to EQ for disposal.

The East tank is now being used to store storm water collected during the stabilization and removal activity which contain elevated phenols. .

THE CLEANUP PROCESS AND CURRENT STATUS

Cleaning up a site such as the GM Powertrain Facility follows a process established by EPA under the Resource Conservation and Recovery Act (RCRA).

The first step is evaluating the current conditions at the site. GM has already identified specific on-site and off-site areas that need investigation.

The second step is called the RCRA Facility Investigation. Its purpose is to gather enough information about conditions in the identified areas to determine the most appropriate way to respond.

One response can be Interim Measures. These are meant to address the most serious areas of pollution quickly while developing a final solution. For example, GM proposes removing some of the contaminated soil on residential property outside the facility. This is the beginning of the cleanup process. GM and EPA are working to complete plans for this Interim Measure so work can begin.

As GM and EPA develop more information on the site, investigators will be better able to determine the Final Corrective Measures Proposal. They may also decide more Interim Measures are needed. This Final Proposal, or remedy, includes a complete assessment of all affected areas, the extent of the contamination and how to get rid of it, and assessment of cleanup work done

under Interim Measures. GM will propose the final remedy and expects GM to present it to the community before formally submitting it to EPA for approval.

The next step is EPA Review of Proposed Corrective Measures. EPA makes a tentative decision on GM's proposed remedy, then presents the decision to the community for a 45-day Public Comment Period. After 45 days, EPA responds to any comments it receives and makes a final decision. GM is then allowed to implement its remedy. This is the Corrective Measures Selection & Implementation step.

The final step in the process is Progress Reports and Long-term Monitoring. GM must keep EPA informed on its progress and will monitor the area to determine effectiveness of the cleanup.

POTENTIAL EXPOSURE ROUTES AND SITE RISKS

There are two main ways people can be exposed to PCB contamination in Bedford. Direct contact with PCB contaminated soil leads to exposure by incidental ingestion (ingestion of PCBs via hand-to-mouth contact) and dermal absorption (absorption of PCBs through the skin). The State of Indiana has advised people not to eat fish caught in creeks near the GM facility.

The concentration of PCBs in local creeks is high enough to cause concern for long-term exposure. But the risk to human health depends on the level of exposure, duration of exposure and how the exposure occurred. In order to minimize exposure and risks, EPA suggests the following:

- don't touch soil near the creeks or sediment in the creeks.
- if any soil gets on the hands, wash with soap and water as soon as possible.
- avoid tracking dirt or mud from these areas into cars or homes.
- try not to stir up any dust in contaminated areas.

- limit access to the creeks.

- do not plant gardens in contaminated areas.

NEAR-TERM PLANS

- GM continues collecting information on the extent of the problem at the Bedford facility. The company is preparing to dig up contaminated soil in affected areas as the beginning of Interim Measures.

- GM will prepare an informational meeting in Bedford to present project progress and present future steps.